

SEQUENCE LISTING

<110> Ross et al.

<120> Polypeptides Containing Glycosylphosphatidylinositol

<130> 71838-01

<150> PCT/GB04/001572

<151> 2004-04-07

<150> 032435.1

<151> 2003-10-16

<150> 0308088.4

<151> 2003-04-09

<160> 20

<170> PatentIn version 3.1

<210> 1

<211> 794

<212> DNA

<213> Artificial sequence

<220>

<223> fusion protein comprising growth hormone fused to domain comprising glycosylphosphatidylinositol

<400> 1

ggatcctcta gactcgaggt cctacaggta tggatctctg gcagctgctg ttgaccttgg 60

cactggcagg atcaagtgtat gctcatatgt tcccaaccat tcccttatcc aggcttttg 120

acaacgcata gtcggcgcc catcgctgc accagctggc ctttgacacc taccaggagt 180

ttgaagaagc ctatatccca aaggaacaga agtattcatt cctgcagaac ccccagacct 240

ccctctgttt ctcagagtct attccgacac cctccaacag ggaggaaaca caacagaaat 300

ccaacctaga gctgctccgc atctccctgc tgctcatcca gtcgtggctg gagccccgtgc 360

agttcctcag gagtgtcttc gccaacagcc tgggtacgg cgcccttgac agcaacgtct 420

atgacccctt aaaggaccta gaggaaggca tccaaacgct gatggggagg ctgaaagatg 480

gcagccccc gactggcag atcttcaagc agacctacag caagttcgac acaaactcac 540

acaacgatga cgcaactactc aagaactacg ggctgctcta ctgcttcagg aaggacatgg 600

acaaggcgtga gacattcctg cgcatcggtc agtggccgtc tgtggagggc agctgtggct 660

tcggcggtgg agggatatc gacaagctgg tcaagtgtgg cggcataagc ctgctggttc 720

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794

<210> 2
<211> 254
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein comprising growth hormone fused to a glycosylphosphatidylinositol domain

<400> 2

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Asp Ala His Met Phe Pro Thr Ile Pro Leu Ser Arg Leu Phe Asp Asn
20 25 30

Ala Ser Leu Arg Ala His Arg Leu His Gln Leu Ala Phe Asp Thr Tyr
35 40 45

Gln Glu Phe Glu Glu Ala Tyr Ile Pro Lys Glu Gln Lys Tyr Ser Phe
50 55 60

Leu Gln Asn Pro Gln Thr Ser Leu Cys Phe Ser Glu Ser Ile Pro Thr
65 70 75 80

Pro Ser Asn Arg Glu Glu Thr Gln Gln Lys Ser Asn Leu Glu Leu Leu
85 90 95

Arg Ile Ser Leu Leu Ile Gln Ser Trp Leu Glu Pro Val Gln Phe
100 105 110

Leu Arg Ser Val Phe Ala Asn Ser Leu Val Tyr Gly Ala Ser Asp Ser
115 120 125

Asn Val Tyr Asp Leu Leu Lys Asp Leu Glu Glu Gly Ile Gln Thr Leu
130 135 140

Met Gly Arg Leu Glu Asp Gly Ser Pro Arg Thr Gly Gln Ile Phe Lys
145 150 155 160

Gln Thr Tyr Ser Lys Phe Asp Thr Asn Ser His Asn Asp Asp Ala Leu
165 170 175

Leu Lys Asn Tyr Gly Leu Leu Tyr Cys Phe Arg Lys Asp Met Asp Lys
180 185 190

Val Glu Thr Phe Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser
195 200 205

Cys Gly Phe Gly Gly Gly Asp Ile Asp Lys Leu Val Lys Cys Gly
210 215 220

Gly Ile Ser Leu Leu Val Gln Asn Thr Ser Trp Met Leu Leu Leu Leu
225 230 235 240

Leu Ser Leu Ser Leu Leu Gln Ala Leu Asp Phe Ile Ser Leu
245 250

<210> 3

<211> 1607

<212> DNA

<213> Artificial Sequence

<220>

<223> fusion protein comprising growth hormone fused to growth hormone receptor

<400> 3

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cactggcagg atcaagtgtat gctcatatgt tcccaaccat tcccttatcc aggcttttg 120

acaacgctag tctccgcgcc catcgctgc accagctggc ctttgacacc taccaggagt 180

ttgaagaagc ctatatccca aaggaacaga agtattcatt cctgcagaac ccccagacct 240

ccctctgttt ctcagagtctt attccgacac cctccaacag ggagggaaaca caacagaaat 300

ccaacctaga gctgctccgc atctccctgc tgctcatcca gtcgtggctg gagcccgtgc 360

agttcctcag gagtgtcttc gccaacagcc tgggtacgg cgcctctgac agcaacgtct 420

atgacctcct aaaggaccta gaggaaggca tccaaacgct gatggggagg ctgaaagatg 480

gcagcccccg gactggcag atcttcaagc agacctacag caagttcgac acaaactcac 540

acaacgatga cgcaactactc aagaactacg ggctgctcta ctgcttcagg aaggacatgg 600

acaaggcgtca gacattcctg cgcatcggtc agtggccgtc tgtggagggc agctgtggct 660

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<210> 4
<211> 525
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein comprising growth hormone fused to growth hormone receptor

<400> 4

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Asp Ala His Met Phe Pro Thr Ile Pro Leu Ser Arg Leu Phe Asp Asn
20 25 30

Ala Ser Leu Arg Ala His Arg Leu His Gln Leu Ala Phe Asp Thr Tyr
35 40 45

Gln Glu Phe Glu Glu Ala Tyr Ile Pro Lys Glu Gln Lys Tyr Ser Phe
50 55 60

Leu Gln Asn Pro Gln Thr Ser Leu Cys Phe Ser Glu Ser Ile Pro Thr

65

70

75

80

Pro Ser Asn Arg Glu Glu Thr Gln Gln Lys Ser Asn Leu Glu Leu Leu
85 90 95

Arg Ile Ser Leu Leu Ile Gln Ser Trp Leu Glu Pro Val Gln Phe
100 105 110

Leu Arg Ser Val Phe Ala Asn Ser Leu Val Tyr Gly Ala Ser Asp Ser
115 120 125

Asn Val Tyr Asp Leu Leu Lys Asp Leu Glu Glu Gly Ile Gln Thr Leu
130 135 140

Met Gly Arg Leu Glu Asp Gly Ser Pro Arg Thr Gly Gln Ile Phe Lys
145 150 155 160

Gln Thr Tyr Ser Lys Phe Asp Thr Asn Ser His Asn Asp Asp Ala Leu
165 170 175

Leu Lys Asn Tyr Gly Leu Leu Tyr Cys Phe Arg Lys Asp Met Asp Lys
180 185 190

Val Glu Thr Phe Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser
195 200 205

Cys Gly Phe Gly Gly Arg Gly Gly Gly Ser Gly Gly Gly Ser
210 215 220

Gly Gly Gly Ser Gly Gly Gly Ser Glu Phe Phe Ser Gly Ser
225 230 235 240

Glu Ala Thr Ala Ala Ile Leu Ser Arg Ala Pro Trp Ser Leu Gln Ser
245 250 255

Val Asn Pro Gly Leu Lys Thr Asn Ser Ser Lys Glu Pro Lys Phe Thr
260 265 270

Lys Cys Arg Ser Pro Glu Arg Glu Thr Phe Ser Cys His Trp Thr Asp
275 280 285

Glu Val His His Gly Thr Lys Asn Leu Gly Pro Ile Gln Leu Phe Tyr
290 295 300

Thr Arg Arg Asn Thr Gln Glu Trp Thr Gln Glu Trp Lys Glu Cys Pro
305 310 315 320

Asp Tyr Val Ser Ala Gly Glu Asn Ser Cys Tyr Phe Asn Ser Ser Phe
325 330 335

Thr Ser Ile Trp Ile Pro Tyr Cys Ile Lys Leu Thr Ser Asn Gly Gly
340 345 350

Thr Val Asp Glu Lys Cys Phe Ser Val Asp Glu Ile Val Gln Pro Asp
355 360 365

Pro Pro Ile Ala Leu Asn Trp Thr Leu Leu Asn Val Ser Leu Thr Gly
370 375 380

Ile His Ala Asp Ile Gln Val Arg Trp Glu Ala Pro Arg Asn Ala Asp
385 390 395 400

Ile Gln Lys Gly Trp Met Val Leu Glu Tyr Glu Leu Gln Tyr Lys Glu
405 410 415

Val Asn Glu Thr Lys Trp Lys Met Met Asp Pro Ile Leu Thr Thr Ser
420 425 430

Val Pro Val Tyr Ser Leu Lys Val Asp Lys Glu Tyr Glu Val Arg Val
435 440 445

Arg Ser Lys Gln Arg Asn Ser Gly Asn Tyr Gly Glu Phe Ser Glu Val
450 455 460

Leu Tyr Val Thr Leu Pro Gln Met Ser Gln Phe Thr Cys Glu Glu Asp
465 470 475 480

Phe Tyr Gly Gly Gly Asp Ile Asp Lys Leu Val Lys Cys Gly Gly
485 490 495

Ile Ser Leu Leu Val Gln Asn Thr Ser Trp Met Leu Leu Leu Leu Leu
500 505 510

Ser Leu Ser Leu Leu Gln Ala Leu Asp Phe Ile Ser Leu
515 520 525

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<210> 5
<211> 1442
<212> DNA
<213> Artificial Sequence

<220>
<223> fusion protein comprising growth hormone fused to growth hormone

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acaacgctag tctccgcgcc catcgctgc accagctggc ctttgacacc taccaggagt      180
ttgaagaagc ctatatccca aaggaacaga agtattcatt cctgcagaac ccccagacct      240
ccctctgttt ctcagagtctt attccgacac cctccaacag ggagggaaaca caacagaaat      300
ccaacctaga gctgctccgc atctccctgc tgctcatcca gtcgtggctg gagcccggtgc      360
agttcctcag gagtgtcttc gccaacagcc tgggtacgg cgcctctgac agcaacgtct      420
atgacctcct aaaggaccta gaggaaggca tccaaacgct gatggggagg ctggaagatg      480
gcagcccccg gactggcag atcttcaagc agacctacag caagttcgac acaaactcac      540
acaacgatga cgcaactactc aagaactacg ggctgctcta ctgcttcagg aaggacatgg      600
acaaggtcga gacattcctg cgcatcggtc agtgccgctc tgtggagggc agctgtggct      660
tcggcggccg cggtggcgga ggttagtggtg gcggaggtag cggtggcgga gttctggtg      720
gcggaggttc cgaattcttc ccaaccattc ctttatccag gtttttgac aacgctagtc      780
tccgcgcca tcgtctgcac cagctggctt ttgacaccta ccaggagttt gaagaagcct      840
atatccaaa ggaacagaag tattcattcc tgcagaaccc ccagacccctt ctctgtttct      900
cagagtctat tccgacaccc tccaacacggg agggaaacaca acagaaatcc aacctagagc      960
tgctccgcattt ctccctgctg ctcatccagt cgtggctggc gcccgtgcag ttccctcagg      1020
gtgtcttcgc caacagcctg gtgtacggcg cctctgacag caacgtctat gacccctaa      1080
aggacctaga ggaaggcatc caaacgctga tggggaggct ggaagatggc agccccccgga      1140
ctgggcagat cttcaagcag acctacagca agttcgacac aaactcacac aacgatgacg      1200
cactactcaa gaactacggg ctgctctact gcttcaggaa ggacatggac aaggtcgaga      1260
cattcctgctg catcggtcag tgccgctctg tggaggcgag ctgtggcttc ggcgggtggag      1320
gggatatcga caagctggtc aagtgtggcg gcataaggct gctggttcag aacacatcct      1380
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<210> 6
<211> 470
<212> PRT
<213> Artificial Sequence

<220>
<223> fusion protein comprising growth hormone fused to growth hormone
<400> 6

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Asp Ala His Met Phe Pro Thr Ile Pro Leu Ser Arg Leu Phe Asp Asn
20 25 30

Ala Ser Leu Arg Ala His Arg Leu His Gln Leu Ala Phe Asp Thr Tyr
35 40 45

Gln Glu Phe Glu Glu Ala Tyr Ile Pro Lys Glu Gln Lys Tyr Ser Phe
50 55 60

Leu Gln Asn Pro Gln Thr Ser Leu Cys Phe Ser Glu Ser Ile Pro Thr
65 70 75 80

Pro Ser Asn Arg Glu Glu Thr Gln Gln Lys Ser Asn Leu Glu Leu Leu
85 90 95

Arg Ile Ser Leu Leu Ile Gln Ser Trp Leu Glu Pro Val Gln Phe
100 105 110

Leu Arg Ser Val Phe Ala Asn Ser Leu Val Tyr Gly Ala Ser Asp Ser
115 120 125

Asn Val Tyr Asp Leu Leu Lys Asp Leu Glu Glu Gly Ile Gln Thr Leu
130 135 140

Met Gly Arg Leu Glu Asp Gly Ser Pro Arg Thr Gly Gln Ile Phe Lys
145 150 155 160

Gln Thr Tyr Ser Lys Phe Asp Thr Asn Ser His Asn Asp Asp Ala Leu
165 170 175

Leu Lys Asn Tyr Gly Leu Leu Tyr Cys Phe Arg Lys Asp Met Asp Lys
180 185 190

Val Glu Thr Phe Leu Arg Ile Val Gln Cys Arg Ser Val Glu Gly Ser
195 200 205

Cys Gly Phe Gly Gly Arg Gly Gly Ser Gly Gly Gly Ser
210 215 220

Gly Gly Gly Ser Gly Gly Gly Ser Glu Phe Phe Pro Thr Ile
225 230 235 240

Pro Leu Ser Arg Leu Phe Asp Asn Ala Ser Leu Arg Ala His Arg Leu
245 250 255

His Gln Leu Ala Phe Asp Thr Tyr Gln Glu Phe Glu Glu Ala Tyr Ile
260 265 270

Pro Lys Glu Gln Lys Tyr Ser Phe Leu Gln Asn Pro Gln Thr Ser Leu
275 280 285

Cys Phe Ser Glu Ser Ile Pro Thr Pro Ser Asn Arg Glu Glu Thr Gln
290 295 300

Gln Lys Ser Asn Leu Glu Leu Leu Arg Ile Ser Leu Leu Leu Ile Gln
305 310 315 320

Ser Trp Leu Glu Pro Val Gln Phe Leu Arg Ser Val Phe Ala Asn Ser
325 330 335

Leu Val Tyr Gly Ala Ser Asp Ser Asn Val Tyr Asp Leu Leu Lys Asp
340 345 350

Leu Glu Glu Gly Ile Gln Thr Leu Met Gly Arg Leu Glu Asp Gly Ser
355 360 365

Pro Arg Thr Gly Gln Ile Phe Lys Gln Thr Tyr Ser Lys Phe Asp Thr
370 375 380

Asn Ser His Asn Asp Asp Ala Leu Leu Lys Asn Tyr Gly Leu Leu Tyr
385 390 395 400

Cys Phe Arg Lys Asp Met Asp Lys Val Glu Thr Phe Leu Arg Ile Val
405 410 415

Gln Cys Arg Ser Val Glu Gly Ser Cys Gly Phe Gly Gly Gly Asp
420 425 430

Ile Asp Lys Leu Val Lys Cys Gly Gly Ile Ser Leu Leu Val Gln Asn
435 440 445

Thr Ser Trp Met Leu Leu Leu Leu Ser Leu Ser Leu Leu Gln Ala
450 455 460

Leu Asp Phe Ile Ser Leu
465 470

<210> 7
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> growth hormone receptor primer

<400> 7
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29

<210> 8
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> growth hormone receptor primer

<400> 8
gccccatatg agcatcaatt gatcctgcg

29

<210> 9
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> primer amplification of human growth hormone

<400> 9
gccccatatg ttcccaacca ttcccttatac

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<210> 10

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<211> 38
<212> DNA
<213> Artificial Sequence

<220>
<223> primer amplification of human growth hormone

<400> 10
gcgcgatatac ccctccaccg ccgaagccac agctgcc 38

<210> 11
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> primer for linking growth hormone and growth hormone receptor to
glycosylphosphatidylinositol domain

<400> 11
gcgcgcgcgg ccctccaccg ccgttagaaat ctttttcaca tg 42

<210> 12
<211> 50
<212> PRT
<213> Homo sapiens

<400> 12

Pro Ser Pro Thr Pro Thr Glu Thr Ala Thr Pro Ser Pro Thr Pro Lys
1 5 10 15

Pro Thr Ser Thr Pro Glu Glu Thr Glu Ala Pro Ser Ser Ala Thr Thr
20 25 30

Leu Ile Ser Pro Leu Ser Leu Ile Val Ile Phe Ile Ser Phe Val Leu
35 40 45

Leu Ile
50

<210> 13
<211> 39
<212> PRT
<213> Homo sapiens

<400> 13

Leu Val Pro Arg Gly Ser Ile Glu Gly Arg Gly Thr Ser Ile Thr Ala
1 5 10 15

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Tyr Asn Ser Glu Gly Glu Ser Ala Glu Phe Phe Phe Leu Leu Ile Leu
20 25 30

Leu Leu Leu Leu Val Leu Val
35

<210> 14
<211> 27
<212> PRT
<213> Homo sapiens

<400> 14

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1 5 10 15

Phe Leu Leu Ile Leu Leu Leu Leu Val Leu
20 25

<210> 15
<211> 5
<212> DNA
<213> Artificial Sequence

<220>
<223> linker peptide for linking growth hormone with growth hormone
receptor

<400> 15
ggggs 5

<210> 16
<211> 6
<212> PRT
<213> Homo sapiens

<400> 16

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1 5

<210> 17
<211> 5
<212> PRT
<213> Homo sapiens

<400> 17

Ser Gly Gly Gly Gly
1 5

<210> 18
<211> 10
<212> PRT
<213> Homo sapiens

<400> 18

Pro Gly Ile Ser Gly Gly Gly Gly Gly Gly
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<210> 19
<211> 16
<212> PRT
<213> Homo sapiens

<400> 19

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1 5 10 15

<210> 20
<211> 15
<212> PRT
<213> Artificial Sequence

<220>
<223> cleavage sequence

<400> 20

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